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Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (canceled).

2. (previously presented) A plant for multi-component liquid mixtures processing comprising a feeding pump (2), a head delivery main (3), a discharge main (4), control instrumentation (11, 12, 13, 14, 19) and a vacuum-generating device (5) comprising a horizontal vacuum chamber (1), wherein the vacuum-generating device (5) is implemented as a liquid-gas jet device (1, 5, 6, 7, 10) connected to the head main (3), a nozzle (6) of which is integrated into a front end wall (7) of the vacuum chamber (1), having a length with respect to its cavity diameter meeting the equation

$$L = (7 \text{ to } 10) * D, \text{ where:}$$

L is the length of the vacuum chamber,

D is the diameter of the vacuum chamber cavity;

the plant further comprises a counterpressure regulator (8) implemented so as to provide for, jointly with the liquid-gas jet device (1, 5, 6, 7, 10), formation of a pressure surge in the vacuum chamber and connected through a pipeline to a rear end

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wall of the vacuum chamber (1), and a vacuum pressure gauge (11) connected to the vacuum chamber (1) in a front section of said vacuum chamber.

3. (previously presented) The plant according to the Claim 2, wherein the nozzle (6) has a length with respect to its diameter constituting

$$\frac{l_c}{d_c} = 1 \text{ to } 5, \quad \text{where:}$$

l_c is the nozzle length,

d_c is the nozzle diameter.

4. (previously presented) The plant according to Claim 2, wherein additionally connected to the head delivery main (3) between the feeding pump (2) and the liquid-gas jet device (1, 5, 6, 7, 10) are a flowmeter (12), a thermometer (13), and a pressure gauge (14).

5. (previously presented) The plant according to Claim 3, wherein additionally connected to the head delivery main (3) between the feeding pump (2) and the liquid-gas jet device (1, 5, 6, 7, 10) are a flowmeter (12), a thermometer (13), and a pressure gauge (14).

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6. (currently amended) A method for processing of multi-component liquid mixtures by vacuum distillation comprising pressure feeding a feed hydrocarbon liquid mixture to a nozzle of a liquid-gas jet device which comprises said nozzle and a vacuum chamber, said nozzle ~~which~~ discharges into said [[a]] vacuum chamber ~~of said device~~, said feed hydrocarbon liquid mixture is pumped ~~fed~~ to said nozzle at a feed pressure of 1 to 12 Mpa which is generated by a pump, wherein due to vaporization of a part of said feed liquid mixture a two-phase supersonic flow is formed in said vacuum chamber, and then a counterpressure is generated which causes a pressure surge in said vacuum chamber with ~~avalanche-like~~ avalanche condensation therein of a gaseous component of said two-phase flow, said counterpressure is 0.4 to 0.7 of the magnitude of said ~~feed~~ pressure generated by said pump.

7. (previously presented) The method of claim 6, wherein said feed hydrocarbon liquid mixture is a liquid petroleum mixture.

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